

Diel and Depth Variation in the Population Densities of Herbivorous Fishes on the Walls in Salt River Submarine Canyon, St. Croix

ILEANA E. CLAVIJO
Department of Marine Sciences
University of Puerto Rico
Mayaguez, Puerto Rico 00708

The distribution and abundance of three families of herbivorous fishes, damselfishes (Pomacentridae), surgeonfishes (Acanthuridae), and parrotfishes (Scaridae), were studied on the east and west walls of Salt River Submarine Canyon by means of repetitive counts of transects placed at the depths of 15, 30 and 45m. Counts were made shortly after sunrise, during midday, and before sunset. Results obtained show that the diversity as well as the abundance of herbivorous fishes decreases with increasing depth. Available foods were sampled by harvesting the benthic algae within quadrats. These data, as well as observations on feeding, indicate that adequate foods are available at the depth range studied. A decrease in the algal biomass with increasing depth is due mainly to the topography of the canyon walls.

Some herbivorous fishes do not utilize the food resources on the walls, but migrate to the area shortly before sunset and sleep in caves at night. These fishes include the largest of the parrotfishes, Scarus coelestinus and S. quacamaia, which are not present on the canyon walls during the day, but

migrate away from the area after dawn and presumably feed on the adjacent shelf.